

REMARKS

Claims 1, 7, 17 and 20 have been amended. No claims have been canceled or added. Accordingly, claims 1-4, 7-10, 13, 17, 20-32, 34, 36-38, 40-42 and 44-110 are currently pending in the application.

Information Disclosure Statement

Applicant is resubmitting documents which are clearly legible for the Examiner's consideration. In addition, additional documents are being cited that were cited in related applications or were newly discovered.

35 U.S.C. 112, first paragraph

Claim 7 has been rewritten into independent form without the recitation of encapsulation as contained in claim 1. Therefore, the rejection under this section has been overcome without admitting to the propriety of the rejection.

Applicant wishes to point out to the Examiner that the portion of the specification referred to by the Examiner does not preclude the combination of structurally woven or knitted fabrics and encapsulation, but instead states that structurally woven or knitted fabrics do not require encapsulation.

Double Patenting

Applicant traverse the Examiner's rejection under this section. The claims in the present application are patentably distinct from the claims in U.S. Patent No. 6,048,810 (the '810 patent). In particular, none of the claims of the '810 patent recite encapsulated outer layers or structurally knitted outer layers as in the present claims. In light of the discussion below, it is submitted that the claimed combination of layers along with the specific form of waterproofing or providing water resistance that is claimed renders the pending claims patentable over the claims of the '810 patent. The same argument applies for the claims pending in U.S. Serial No. 08/887,847.

35 U.S.C. 103

The rejection of the claims under this section is traversed as follows. Some of the fundamental differences between Broun et al and the present invention will first be explained and then the claim rejections will be discussed in the order they are present in the Office Action.

**THE LACK OF MOTIVATION TO APPLY THE DISCLOSURE OF BROUN ET AL
TO APPAREL**

Contrary to the Examiner's assertion, the structure taught by Broun et al is not capable of performing the intended use of the present invention of transferring moisture vapor in an apparel. The Examiner's attention is directed to the test results shown by Broun et al. These results indicate the great number of hours that are required for the moisture to be transferred. This rate of transfer would have no utility in apparel in which a much more rapid transfer of moisture is required.

In addition, the term "apparel" is repeated in the body of the independent claims and therefore should be given patentable weight. Applicant strongly disagrees with the Examiner's contention that it would have been obvious to apply Broun et al's teaching to apparel. In fact, Applicant submits that Broun et al teaches away from any application to apparel. The passive moisture transfer permitted by Broun et al's disclosure would not be useful in apparel, while it may be useful for a bag for rifles, etc.

The Examiner's argument regarding the motivation to apply Broun et al's teaching to apparel is clearly improper and overreaching. The Examiner alleges that "motivation to do so would be to expand the number of applications of the Broun et

al invention". The clear impetus behind this alleged motivation is hindsight reasoning in which the actual motivation is provided by the present application.

Indeed, in support of Applicant's contention that Broun et al teaches away from any application to apparel, the Examiner's attention is directed to column 3, lines 59-63 and column 8, lines 23-27 where Broun et al specifically state that their protective bag can be used for carrying and storage of several items including clothing. Therefore, it is submitted that one of the ordinary skill in the art would not find any motivation from Broun et al's disclosure to modify the disclosed bag for carrying clothing into clothing itself. Furthermore, the detailed description from column 5, line 25 to column 8, line 32 would strongly indicate to one of ordinary skill in the art that the present invention is applicable only to protective bags for certain types of equipment. In particular, at column 6, lines 31-34, Broun et al indicate that reinforcing plastic or wood may be used at the edges or end of the bag to prevent puncturing of the bag or case where the contents of the bag or case is sharp or pointed. Such statements strongly refute the Examiner's suggestion that the teaching of Broun et al could be applied to apparel.

**BROUN ET AL'S MOISTURE TRANSFER SYSTEM IS COMPLETELY
DIFFERENT FROM THE PRESENTLY CLAIMED INVENTION**

Broun et al disclose a bag that is used to store equipment and employs a relatively passive moisture transfer system as compared with the present invention. Broun et al disclose that liner 12 permits moisture to be wicked away from the contents of the bag or case and allows the moisture to be "dispersed over a large surface area so as to accelerate the rate at which moisture evaporates through the open cell foam interior layer 14 and hydrophobic shell 16" (see column 4, lines 19-24 and column 6, lines 55-58).

As admitted by the Examiner, Broun et al do not disclose that the outer layer is encapsulated for waterproofing. Instead, Broun et al disclose a hydrophobic shell 16 that has a "sufficiently small pore size (microporous) to prevent penetration of water, while allowing the passage of water vapor" (see column 4, lines 59-63). Therefore, "shell 16 is porous enough to allow evaporation of moisture through it from the inside out" (see column 4, lines 65-67). As such, Broun et al can satisfy their objective by providing a "protective bag or case made from protective material 10 [that is] water repellant, yet allows water vapor trapped inside the bag or case to escape" (see column 5, lines 1-4).

The results of the moisture lost test disclosed by Broun et al support the proposition that Broun et al were merely concerned with allowing moisture trapped inside a bag or case to evaporate. Broun et al disclose in their moisture loss test that when water was soaked into the liner and foam layers of the rifle case, and then the rifle case was rolled and squeezed to remove as much water as possible, it still required approximately 24 hours for the rifle case to dry to its original weight (see column 7, lines 25-61).

Certainly, one of ordinary skill in the art would not contemplate applying Broun et al's teaching to apparel. As stated in the SUMMARY OF THE INVENTION section of the present invention, an object of the present invention is to provide apparel that can quickly transfer moisture away from an individual's body so that the individual can feel more comfortable (see specification, page 2, lines 5-7). In addition, it is stated in this same section that another object of the present invention is to provide individuals with active wear that is more functional and can better deal with the additional moisture that is generated by participating in certain activities such as in-line skating, snowboarding, hiking, etc. (see specification, page 2, lines 8-13). Each layer contained in Applicant's claimed apparel must have moisture transfer properties. For example, even the second

layer, which is a foam material, has moisture transfer characteristics while also providing some structural support (see specification, page 5, lines 4-8).

REJECTION OF CLAIM 20 UNDER 35 U.S.C. §103(a)
AS BEING UNPATENTABLE OVER BROUN ET AL

Claim 20 is directed to a moisture transfer apparel to be worn by individuals engaged in activities that generate moisture including an inner moisture transfer material and an outer moisture transfer material comprised of natural fibers or a blend of natural and synthetic fibers that are encapsulated for waterproofing. The combination of layers is breathable and enables moisture vapor to be transferred through the apparel from the first layer through the second layer so as to keep the individual dry. Therefore, the claimed apparel is both breathable and has an encapsulated outer moisture transfer layer for waterproofing. Neither of these features are disclosed or suggested by Broun et al.

Broun et al does not disclose a protective bag that is "breathable" as that term is interpreted in the present application. Breathability requires active moisture transfer characteristics. Broun et al disclose a foam layer and a hydrophobic shell that permit moisture to "evaporate" (see column 4, lines 22-24). It is improper to equate

breathability with permitting water vapor evaporate. Therefore, it necessarily follows that it is improper to apply Broun et al's disclosure of a protective bag for which evaporation is adequate to the technical apparel of the present invention for which breathability is required.

Attached as Appendix I is a Special Report based upon a 50 page report prepared by Sports Market Data, which was published on March 27, 2002. The first page of the Special Report discusses breathability and cites one outdoor apparel supplier as saying that "for most outdoor enthusiasts, whose activities involve a few hours (not days) of time, the storm within (sweat from exertion) is more important than the storm without". This further supports Applicant's contention that there is a great difference between breathability and permitting evaporation.

Furthermore, Broun et al are completely silent with regard to encapsulation. As mentioned earlier, Broun et al disclose a hydrophobic shell 16 that has a sufficiently small pore size (micropores) to prevent penetration of water vapor (see column 4, lines 59-64).

The Examiner acknowledges that Broun et al is completely silent as to encapsulation. To solve this deficiency, the Examiner improperly takes Official Notice of the fact that encapsulated, breathable, waterproof fabrics are well-known in

the art. The Examiner cites, for example, Cordura® by DuPont®. However, Applicant submits that Cordura® was not encapsulated prior to the filing date of the present application. In addition, the Examiner asserts that Applicant has admitted knowing of encapsulated fabrics including Cordura® in the specification on page 8. Applicant respectfully disagrees. The present specification discloses encapsulation that can be performed, for example, by NEXTEC (see specification, page 11, lines 18-20). The Cordura® encapsulated/waterproof, breathable membrane is not mentioned on page 8 as something that already exists in the prior art, but as part of a list of possible outer moisture transfer materials that could be used as the outer layer 40 according to Applicant's invention. Applicant did not intend to suggest that the prior art contains a Cordura® that is encapsulated.

Attached as Appendix II is a brief history of NEXTEC Applications, Inc. This brief history indicates that NEXTEC went commercial in 1997 and launched EPIC in 1999. This history also indicates that NEXTEC encapsulated DuPont®'s TACTEL® in January of 2001.

**REJECTION OF CLAIMS 1-4, 7 AND 17 UNDER 35 U.S.C. §103(a)
AS BEING UNPATENTABLE OVER BROUN ET AL**

The arguments raised above in connection with claim 20 are hereby incorporated by reference. In addition, claims 1

and 7 recite apparel having four layers. Broun et al discloses a protective rifle case having three layers. In addition to the previously mentioned differences between the presently claimed invention and Broun et al, which patentably define the present invention over Broun et al, it is further submitted that one of ordinary skill in the art would not be motivated to add an additional layer to Broun et al's rifle case.

According to Broun et al's preferred embodiment, the rifle case should be disposable such that its "intended cost is so low that it may be discarded when it becomes soiled or worn" (See Col. 6, line 66 to Col. 7, line 2). As such, one of ordinary skill in the art would not be motivated by such statements to add additional layers to Broun et al's rifle case, which would increase cost. It is also submitted that one of ordinary skill in the art would not be motivated to use encapsulation technology or structurally knitted or woven fabrics, as claimed, which would increase cost. Once again, it should be clearly apparent that one of ordinary skill in the art would not find it obvious to apply Broun et al's disclosure to apparel.

**REJECTION OF CLAIMS 21-24, 89, 91, 110 UNDER 35 U.S.C. §103(a)
AS BEING UNPATENTABLE OVER BROUN ET AL IN VIEW OF COLVIN ET AL**

The Examiner's rejection of these claims is clearly improper. The alleged motivation to combine these two references in the manner asserted is completely unsupportable.

The Examiner states that Broun et al teach that their bags are subjected to adverse storage conditions, such as high temperatures. The Examiner then improperly concludes that one of ordinary skill in the art would be motivated to look toward the teaching of Colvin et al.

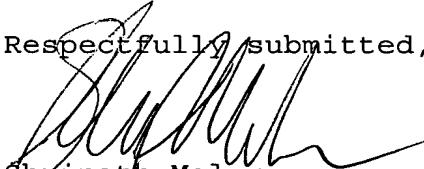
Broun et al discuss plastic bags formed of a non-porous plastic film that permit their interior to become very hot if exposed to direct sunlight, due to a green-house effect (See Column 1, lines 44-46). Broun et al also disclose that a clear plastic bag would become very hot allowing for easy puncturing when the bag is exposed to direct sunlight (See Col 1, lines 60-65). Furthermore, as previously stated, Broun et al suggest creation of a low cost disposable bag (See Col. 6, line 66 to Col. 7, line 2).

To suggest that this disclosure of Broun et al would lead one of ordinary skill in the art to look to Colvin et al's disclosure to provide reversible enhanced thermal properties is clearly improper. One of ordinary skill in the art would not look to advanced properties provided by phase change

molecules in order to enhance the performance of a disposable bag that is used to store cameras and rifles. One of ordinary skill in the art would also not be motivated to then apply such a combination to apparel that lacks the functionality that would be required for the apparel.

CONCLUSION

In view of the foregoing amendments and remarks, it is submitted that the application is in condition for allowance. Reconsideration is hereby requested.

Respectfully submitted,

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